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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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HICKMAN PALERMO TRUONG & BECKER, LLP
1600 WILLOW STREET
SAN JOSE, CA 95125

EXAMINER

ALI, AHMEDUR R

ART UNIT	PAPER NUMBER
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2131

DATE MAILED: 01/02/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/435,015

Applicant(s)

JIAO, FAN

Examiner

Ahmedur Ali

Art Unit

2131

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10/14/03.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 November 1999 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

1. The application has been examined. Claims 1-20 are pending in this Office Action.

Response to Amendment

2. Examiner withdraws the objections to the abstract as to the amendments to the abstract overcome the objections.

Response to Arguments

3. Applicant's arguments with respect to independent claims 1, 11 and 13, 15-16, and dependant claims 2-10, 12, 14 and 17-20 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-5, 7-10, and 15-17, and 20-24 are rejected under 35 U.S.C. 102(e) as being anticipated by Harrison et al. U.S. Patent No. 6,330,560 ('Harrison' hereinafter).

6. With respect to claim 1, Harrison teach a directory-enabled network element (see abstract; col. 1, lines 19-37; col. 3, lines 20-25, 59-61; Fig. 1).

7. Claim 2 rejected as above rejecting claim 1, further comprising a directory enabling element installed in and executed by the network element, and configured to query, access, and update directory information that is managed by a directory service of a network that includes the network element (see col. 1, lines 19-25; col. 4, lines 16-36).

8. Claim 3 rejected as above in rejecting claim 1, further comprising:
a directory enabling element installed in and executed by the network element, and configured to query, access, and update directory information that is managed by a directory service of a network that includes the network element (see col. 1, lines 19-25; col. 4, lines 16-36)

an application programming interface coupled to the directory enabling element and configured to receive directory services requests from application programs and provide the directory services requests to the directory enabling element (see col. 1, lines 47-65).

9. Claim 4 rejected as above in rejecting claim 1, comprising:
a directory enabling element installed in and executed by the network element, and configured to query, access, and update directory information that is managed by a directory service of a network that includes the network element (see col. 1, lines 19-25; col. 4, lines 16-36);

an application programming interface coupled to the directory enabling element and configured to receive directory services requests from application programs and provide the directory services requests to the directory enabling element (see col. 1, lines 47-65).

a locator service coupled to the directory enabling element and accessible using the application programming interface and configured to locate servers that provide the directory services in the network (see col. 4, lines 15-36).

10. Claim 5 rejected as above in rejecting claim 1, further comprising:

a directory enabling element installed in and executed by the network element, and configured to query, access, and update directory information that is managed by a directory service of a network that includes the network element (see col. 1, lines 19-25; col. 4, lines 16-36);

a bind service in the directory enabling element and coupled to a security protocol and configured to bind an external application program to the security protocol (see col. 2, lines 38-53; col. 4, lines 15-36).

11. Claim 7 rejected as above in rejecting claim 1, further comprising:

a directory enabling element installed in and executed by the network element, and configured to query, access, and update directory information that is managed by a directory service of a network that includes the network element (see col. 1, lines 19-25; col. 4, lines 16-36);

a locator service coupled to the directory enabling element and configured to locate servers that provide the directory services in the network (see col. 4, lines 15-36);

an event service coupled to the directory enabling element and configured to receive registration of an event and an associated responsive action from an application program, notify the application program when the event occurs, and execute the associated responsive action in response thereto (see col. 1, lines 47-65).

12. Claim 8 rejected as above in rejecting claim 1, further comprising:

a directory enabling element installed in and executed by the network element, and configured to query, access, and update directory information that is managed by a directory service of a network that includes the network element (see col. 1, lines 19-25; col. 4, lines 16-36);

an application programming interface coupled to the directory enabling element and configured to receive directory services requests from application programs and provide the directory services requests to the directory enabling element (see col. 1, lines 47-65).

a locator service coupled to the directory enabling element and configured to locate servers that provide the directory services in the network (see col. 4, lines 15-36);

an event service coupled to the directory enabling element and configured to receive registration of an event and an associated responsive action from an application program, notify the application program when the event occurs, and execute the associated responsive action in response thereto (see col. 1, lines 47-63).

13. Claim 9 rejected as above in rejecting claim 1, further comprising:

a directory enabling element installed in and executed by the network element, and configured to query, access, and update directory information that is managed by a

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directory service of a network that includes the network element (see col. 1, lines 19-25; col. 4, lines 16-36);

a locator service coupled to the directory enabling element and configured to locate servers that provide the directory services in the network (see col. 4, lines 15-36);

a group policy interface coupled to the directory enabling element and configured to receive and update the directory service with one or more definitions of directory services policies that apply to groups of network devices in the network (see col. 2, lines 23-45).

14. Claim 10 rejected as above in rejecting claim 1, further comprising:

a directory enabling element installed in and executed by the network element, and configured to query, access, and update directory information that is managed by a directory service of a network that includes the network element (see col. 1, lines 19-25; col. 4, lines 16-36);

a bind service in the directory enabling element and coupled to an security protocol and configured to bind an external application program to the security protocol (see col. 2, lines 38-53; col. 4, lines 15-36)

an event service coupled to the directory enabling element and accessible using the application programming interface and configured to receive registration of an event and an associated responsive action from an application program, notify the application program when the event occurs, and execute the associated responsive action in response thereto (see col. 1, lines 47-65).

15. With respect to claim 15, Harrison teach a method of using a directory-enabled network element to query, access, or update directory information of a directory service of a network that includes the directory-enabled network element, wherein the directory-enabled network element comprises a directory enabling element installed in and executed by the network element, and configured to query, access, and update directory information that is managed by a directory service of a network that includes the network element (see abstract; col. 1, lines 19-25; col. 4, lines 16-36); the method comprising the steps of:

- binding the application program to the security protocol (see col. 4, lines 16-36);
- creating an event and an associated responsive action that are associated with the application program (see col. 1, lines 47-65);
- in response to occurrence of the event, executing the responsive action, obtaining policy information from the directory service, and converting the policy information into one or more commands that are executable by the directory-enabled network element (see col. 2, lines 23-45).

16. With respect to claim 16, Harrison teach a computer-readable medium carrying one or more sequences of instructions for using a directory-enabled network element to query, access, or update directory information of a directory service of a network that includes the directory-enabled network element (see col. 1, lines 19-25; col. 4, lines 16-36), wherein execution of the one or more sequences of instructions by one or more processors causes the one or more processors to perform the steps of:

creating and storing a directory enabling element installed in and executed by the network element, and configured to query, access, and update directory information that is managed by a directory service of a network that includes the network element (see col. 1, lines 19-25; col. 4, lines 16-36).

binding the application program to the security protocol (see col. 4, lines 16-36);

creating an event and an associated responsive action that are associated with the application program (see col. 1, lines 47-65);

in response to occurrence of the event, executing the responsive action, obtaining policy information from the directory service, and converting the policy information into one or more commands that are executable by the directory enabled network element (see col. 4, lines 16-46).

17. Claim 17 rejected as above in rejecting claim 16, further performing the steps of:

locating a nearest directory server and binding the application program to the nearest directory server that is located (see col. 1, lines 47-63);

locating a nearest event server and binding the application program to the nearest event server that is located (see col. 4, lines 15-36).

18. Claim 20 rejected as above in rejecting claim 16, further wherein execution of the one or more sequences of instructions by one or more processors causes the one or more processors to perform the further steps of establishing an application programming interface coupled to the directory enabling element and configured to receive directory services requests from application programs and provide the directory

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services requests to the one or more processors (see col. 1, lines 47-67 to col. 2, lines 1-14).

19. With respect to claim 21, a Harrison teach a directory services-enabled network element (see col.1, lines 19-37; col. 3, lines 20-25, 59-61)

20. With respect to claim 22, a Harrison teach a system comprising a network element enabled to automatically interface with directory services (see col. 1, lines 47-65)

21. Claim 23 rejected as above in rejecting claim 22, wherein the network element obtains policy information form the directory services and updates the directory service (see col. 2, lines 23-45)

22. Claim 24 rejected as above in rejecting claim 22, wherein the network element includes a protocol agent for interfacing with directory services (see col. 3, lines 20-53).

Claim Rejections - 35 USC § 103

23. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

24. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Harrison et al. U.S. Patent No. 6,33,560 ('Harrison' hereinafter) in view of Day, II et al. U.S. Patent No. 5,968,116 ('Day, II' hereinafter).

25. Harrison teach claim 6 rejected as above in rejecting claim 2.

Harrison does not explicitly disclose a Unicode translation service configured to query, access, and update directory information that is encoded in a Unicode international character format.

Day, II teach a Unicode translation service configured to query, access, and update directory information that is encoded in a Unicode international character format (see col. 6, lines 13-31).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Day, II within the system of Harrison because both references are directed to a directory-enabled network element, and because the implementation of the Unicode translation service of Day, II in Bernhard would allow for the data within the directory to be effectively transported through the network without corruption, further improving the reliability of the directory information that is encoded in a Unicode international character format.

26. Claims 11-14 and 25-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harrison et al. U.S. Patent No. 6,33,560 ('Harrison' hereinafter) in view of Baum et al. U.S. Patent No. 6,400,707 ('Baum' hereinafter).

27. With respect to claim 11, Harrison teach a directory-enabled packet router (see col. 1, lines 19-25, 47-65; col. 3, lines 20-25, 59-61).

Harrison does not explicitly disclose a packet-switched network.

Baum disclose a packet-switched network (see col. 3, lines 48-64)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Baum within the system of Harrison because both references are directed to a directory-enabled network and the combination of both references would enable packets sent from the directory to be divided into packets before they are sent , and once all the packets forming the message arrive at the destination to recompile into the original message, further withstanding delays in transmission and increasing the efficiency in which the packets of data are received at the destination.

28. Claim 12 rejected as above in rejecting claim 11, further comprising:

a directory enabling element installed in and executed by the router, and configured to query, access, and update directory information that is managed by a directory service of a network that include the router (see col. 1, lines 19-25; col. 4, lines 16-36);

a bind service in the directory enabling element and coupled to a security protocol and configured to bind an application program to the security protocol (see col. 2, lines 38-53; col. 4, lines 15-36);

an event service coupled to the directory enabling element and accessible using the application programming interface and configured to receive registration of an event and an associated responsive action from an application program, notify the application program when the even occurs, and execute the associated responsive action in response thereto (see col. 1, lines 47-65).

29. With respect to claim 13, Harrison teach a directory-enabled network data switch (see col. 1, lines 19-37; col. 3, lines 20-25, 59-61).

Harrison does not explicitly disclose a packet-switched network.

Baum disclose a packet-switched network (see col. 3, lines 48-64)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Baum within the system of Harrison because both references are directed to a directory-enabled network and the combination of both references would enable packets sent from the directory to be divided into packets before they are sent , and once all the packets forming the message arrive at the destination to recompile into the original message, further withstanding delays in transmission and increasing the efficiency in which the packets of data are received at the destination.

30. With respect to claim 14 rejected as above in rejecting claim 13, further comprising:

a directory enabling element installed in and executed by the switch, and configured to query, access, and update directory information that is managed by a directory service of a network that includes the switch (see col. 3, lines 48-67 to col. 4, lines 1-14);

a bind service in the directory enabling element and coupled to a security protocol and configured to bind an application program to the security protocol (see col. 3, lines 48-67 to col. 4, lines 1-63; col. 6, lines 66-67 to col. 7, lines 1-24);

an event service coupled to the directory enabling element and accessible using the application programming interface and configured to receive registration of an event and an associated responsive action from an application program, notify the application program when the event occurs, and execute the associated responsive action in response thereto (see col. 7, lines 25-64).

31. With respect to claim 25, Harrison teach a directory-enabled packet router (see col. 1, lines 19-25, 47-65; col. 3, lines 20-25, 59-61).

Harrison does not explicitly disclose a packet-switched network.

Baum disclose a packet-switched network (see col. 3, lines 48-64)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Baum within the system of Harrison because both references are directed to a directory-enabled network and the combination of both references would enable packets sent from the directory to be divided into packets before they are sent , and once all the packets forming the message arrive at the destination to recompile into the original message, further withstanding delays in transmission and increasing the efficiency in which the packets of data are received at the destination.

32. With respect to claim 26, Harrison teach a directory-enabled network data switch (see col. 1, lines 19-37; col. 3, lines 20-25, 59-61).

Harrison does not explicitly disclose a packet-switched network.

Baum disclose a packet-switched network (see col. 3, lines 48-64)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Baum within the system of Harrison because both references are directed to a directory-enabled network and the combination of both references would enable packets sent from the directory to be divided into packets before they are sent , and once all the packets forming the message arrive at the destination to recompile into the original message, further withstanding delays in transmission and increasing the efficiency in which the packets of data are received at the destination.

33. Claims 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harrison et al. U.S. Patent No. 6,33,560 ('Harrison' hereinafter) in view of Nessett et al. U.S. Patent No. 5,968,176 ('Nessett' hereinafter).

34. Harrison teach claim 18 rejected as above in rejecting claim 16.

Harrison does not explicitly disclose a virtual private network is created between the router and another network device.

Nessett teach translating the policy information into one or more values that are ready to apply to a router, whereby a virtual private network is created between the router and another network device (see col. 14, lines 31-47; col. 15, lines 6-67).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Nessett within the system of Bernhard to arrive at the invention as claimed because both references are directed to a computer-readable medium, and because the implementation of virtual private network

would increase the level of protection of the packets that are moved between the source and destination, further preserving the integrity of the data within the directory-enabled network element.

35. Harrison teach claim 19 rejected as above in rejecting claim 16.

Harrison does not explicitly disclose a set of internal data structures of a router and a dynamic IPSEC configuration.

Nessett teach translating the policy information into one or more values that are ready to apply to a set of internal data structures of a router, by calling one or more internal NOS API functions, whereby a dynamic IPSEC configuration is created that connects the router and at least one other network device (see col. 10, lines 24-59; col. 13, lines 51-67 to col. 14, lines 19-30).


It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Nessett within the system of Bernhard to arrive at the invention as claimed because both references are directed to a computer-readable medium, and because the implementation of IPSEC configuration would increase the level of protection of the communication that occurs between the router and one other network device, effectively ensuring the secure packet exchanges at the IP layer, and further improving the security of the communication interface of the combined system.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ahmedur Ali whose telephone number is 305-4667. The examiner can normally be reached on 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz Sheikh can be reached on 305-9648. The fax phone numbers for the organization where this application or proceeding is assigned are 305-3718 for regular communications and 305-3718 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 305-3900.

ara
December 18, 2003


GREGORY MORSE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100